

Amendments to the Claims

Although no claims are being amended herein, all the claims currently pending in this application have been reproduced below.

1. (Previously presented) A printing apparatus for forming a color image by applying different color inks to a printing material while bi-directionally moving a recording head to scan the printing material, said apparatus comprising:

control means for effecting recording by application of ink for each pixel area as a unit, the pixel area representing a primary or secondary color, said control means being effective to control a number of ink droplets of each color applied to each pixel area and an amount of the ink applied by a unit application of the ink;

changing means for changing an order of applications of the inks of different colors to be applied at least at one amount for printing the secondary color to a secondary color pixel area; and

forming means for forming the secondary color while making the order of applications of the inks to at least one of a plurality of the secondary color pixel areas arranged along a predetermined direction different from the order of another, by said changing means.

2. (Previously presented) An apparatus according to Claim 1, wherein said forming means forms the secondary color while changing by said changing means the

order for substantially half of a number of the secondary color pixel areas arranged along the predetermined direction.

3. (Previously presented) An apparatus according to Claim 1, wherein said recording head includes one or more sets of recording elements for application of the color ink, the recording elements constituting each set being arranged in a scanning direction symmetrically, and said changing means selects one of the recording elements constituting the set to make the order of applications of the inks to the pixel area different from the order of another.

4. (Previously presented) An apparatus according to Claim 3, wherein said changing means includes print buffers for the symmetrically arranged recording elements, said print buffers selectively store print data for applying the ink from corresponding recording elements to change the order of applications of the inks to at least one of the secondary color pixel area arranged in each raster line.

5. (Original) An apparatus according to Claim 4, wherein said forming means distributes the print data to the print buffers on the basis of an image signal corresponding to a color image to make the order of applications of the inks to at least one of the secondary color pixel areas arranged in each raster line different from the order of another.

6. (Original) An apparatus according to Claim 5, wherein said forming means distributes the print data randomly to the print buffers on the basis of the image signal corresponding to the color image.

7. (Previously presented) An apparatus according to Claim 5, wherein said forming means distributes the print data alternately to the print buffers on the basis of the image signal corresponding to the color image.

8. (Previously presented) An apparatus according to Claim 1, wherein said recording head includes recording elements for applying different color inks arranged in a scanning direction, and said changing means changes the order of applications of the inks to the pixel areas by selecting a scanning direction of the recording head in which the ink is applied to the pixel areas.

9. (Original) An apparatus according to Claim 2, wherein the predetermined direction is a raster scan direction.

10. (Previously presented) An apparatus according to Claim 2 or 9, wherein the predetermined direction is a direction of a column.

11. (Previously presented) An apparatus according to Claim 1, wherein dots of different colors applied to the pixel area are at least partly overlapped with each other.

12. (Previously presented) An apparatus according to Claim 2, wherein a plurality of secondary color dots provided by a certain color ink and another color ink in different orders, are allotted in the pixel area.

13. (Previously presented) An apparatus according to Claim 3, wherein said recording head has recording elements for applying at least cyan, magenta and yellow inks, and the recording elements for one color are disposed symmetrically in the scanning direction with respect to the recording elements for another color.

14. (Previously presented) An apparatus according to Claim 13, wherein a number of sets of recording elements at least for the cyan, magenta and yellow colors is two.

15. (Previously presented) An apparatus according to Claim 13, wherein said recording head further includes a recording elements for applying black ink.

16. (Original) An apparatus according to Claim 12, wherein the different color inks applied to the pixel area are applied in a single scan of said recording head.

17. (Previously presented) An apparatus according to Claim 12, further comprising symmetric recording heads which have recording elements for applying different amounts of inks, the recording elements being arranged alternately.

18. (Previously presented) An apparatus according to Claim 12, further comprising symmetric recording heads which have recording elements for applying different amounts of inks, the recording elements being arranged alternately in an opposite order.

19. (Original) An apparatus according to Claim 12, wherein the different color inks applied to the pixel area are applied in scans of different directions of said recording head.

20. (Previously presented) An apparatus according to Claim 1, wherein said recording head is operable in a first mode in which a relatively larger amount of ink is applied and a second mode in which a relatively smaller amount of ink is applied.

21. (Original) An apparatus according to Claim 1, wherein a relatively larger amount of ink, a relatively smaller amount of ink and relatively larger and smaller amounts of inks are applied to the pixel area.

22. (Previously presented) An apparatus according to Claim 1, wherein the recording head ejects the ink by heat.

23. (Previously presented) A printing apparatus for forming a color image by application of different color inks to a printing material while bi-directionally moving a recording head to scan the printing material, said apparatus comprising:

control means for effecting recording by application of the ink for each pixel area, said control means applying different color inks to a pixel area representing a process color and controlling an amount of the ink applied by a unit application in accordance with multi-level data corresponding to the pixel area;

changing means for changing an order of applications of inks of different colors to be applied at least at one amount to form a process color in a process color pixel area; and

forming means for forming the process color by making an order of applications of the inks to at least one of the process color pixel areas arranged in a raster direction different from the order of another, by said changing means.

24. (Previously presented) A printing apparatus for forming a color image by effecting scanning bi-directional movement of a recording head having recording elements corresponding to different color inks arranged symmetrically in a scanning direction and applying the color inks at different amounts, said apparatus comprising:

a plurality of print buffers corresponding to the symmetrically arranged recording elements; and

distributing means for distributing print data for a color to be printed to at least one of the print buffers on the basis of an image signal corresponding to the color image.

25. (Original) An apparatus according to Claim 24, wherein said distributing means distributes alternately to at least one of said print buffers corresponding to the print data of the color to be printed.

26. (Original) An apparatus according to Claim 24, wherein said distributing means distributes randomly to at least one of said print buffers corresponding to the print data of the color to be printed.

27. (Previously presented) An apparatus according to Claim 24, wherein said distributing means distributes the print data to one or some of said print buffers when a level of the image signal is low, and distributes the print data to any one of said print buffers when the level of the image signal is high.

28. (Previously presented) A printing method for forming a color image by application of different color inks onto a printing material at different amounts while bidirectionally moving a recording head to scan the printing material, wherein recording is effected by application of ink for each pixel area as a unit, the pixel area representing a primary or secondary color, and a number of ink droplets of each color applied to each pixel area and an amount of the ink applied by a unit application of the ink are controlled in accordance with multi-level data, said method comprising:

a first step of application of ink of a certain color ink at least at one amount to form a secondary color to a secondary color pixel area; and

a second step of application of different color inks to form the secondary color in the secondary color pixel area in an order of applications which is different from the order in the first step.

29. (Previously presented) A method according to Claim 28, wherein the recording head includes two sets of recording elements for application of the color ink, the recording elements constituting each set being arranged in the scanning direction symmetrically, and said first step and said second step are carried out through one scanning motion of the recording head.

30. (Previously presented) A print having a color image provided by different color inks, comprising:

a printing material; and

a plurality of secondary color pixel areas arranged in a predetermined direction on the printing material,
wherein the plurality of pixel areas are printed by different color inks at least at one amount, and wherein an order of applications of the inks to at least one of the pixel areas is different from the order of another.
